

1

2

Remarks

3

This amendment is responsive to the office action dated Mar 23, 2007.

5

With regard to the 35 USC 103(a) rejection of claim 1 over Cao 2002/0031324 in view of Chen 6,647,173, applicant notes that the attenuator of Cao relies on a partially rotating reflector having an axis of rotation, whereas the present invention has a stationary mirror. With regard to Chen, applicant notes that the reflective "shutter" 21 of Chen has planar rotation about a pivot point (col 3 lines 39-45), and is used to maximally reflect light back to the dual fibers 11 and 12 (Chen col 3 lines 50-55), whereas the present invention has a single input fiber 101 and a single output fiber 102, and the shutter serves to attenuate light on the optical path. Further, the structure and function of the moving mirror of Chen modifies the optical path to form a switch between two pairs of optical fibers, resulting in the switching of light coupled from an upper input fiber to either a lower output fiber, or an upper output fiber. Examining the operation of Chen with a dual fiber pair comprising an input fiber and an output fiber, the shutter of Chen is optimally reflecting light from a particular input fiber **back to an adjacent output fiber to**

1   **minimize attenuation and maximize coupling to the dual**  
2   **fiber pair input and output fibers**, whereas in the present  
3   invention, attenuation is maximized when movable shutter is  
4   obstructing the optical path from the input fiber to the  
5   output fiber. Therefore, the combination of Chen and Cao  
6   does not anticipate the structure of function of the  
7   present invention. Applicant also points out that neither  
8   Chen nor Cao separately or in combination teach an axial  
9   magnetic field which controls a movable shutter, or a  
10   movable shutter which is entirely supported by a current  
11   carrying leadwire. Nevertheless, to further distinguish  
12   the present claim 1 from the movable mirror of Chen,  
13   applicant has amended the claim to explicitly recite the  
14   additional limitation of an optical attenuator which has  
15   maximum attenuation when the shutter is positioned in the  
16   optical path.

17       Dependent claims 2, 6, 8, 9 are allowable as depending  
18   on allowable independent claim 1.

19       Examiner had allowed claims 13 and 16-23 in the office  
20   action of 3/23/07, and these claims are unchanged.

21

22

23

24

1  
2 With this amendment, the present application is in  
3 condition for allowance.

4  
5 Please direct all correspondence to the agent of  
6 record:

7 Jay Chesavage

8 Customer Number 24346

9 3833 Middlefield Rd

10 Palo Alto, Ca. 94303

11 650-619-5270  
12  
13  
14  
15

16 Respectfully Submitted,

17   
18 \_\_\_\_\_  
19 Jay Chesavage

20 Registration No. 39,137  
21